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INFORMATION REPORT INFORMATION

CENTRAL INTELLIGENCE AGENCY

EXEMPT

COUNTRY North Korea

SUBJECT The History, Facilities, Curriculum and Organization of the Ch'ŏngsu Chemical Professional School

REPORT

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REFERENCES

50X1-HUM

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THIS IS UNEVALUATED INFORMATION.

the Ch'ŏngsu Chemical Professional School

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(Note: Washington distribution indicated by "X"; Field distribution by "#".)

50X1-HUM

INFORMATION REPORT INFORMATION REPORT

 50X1-HUM

Ch'ongsu Chemical Professional School that was established after the Korean liberation is located in Ch'ongsu Laborer's District (XE 607772 /6135 11/, N 40-26, E 124-54), Ch'ongsong-gun, P'yongan-pukto. The number of students enrolled in the school ~~was~~ totalled about 300 however 50X1-HUM the expansion of the school after the Armistice enabled it to accomodate about 500 students. the chemical professional school was pro- 50X1-HUM moted to the status of a senior chemical technical school according to the reorganization of educational system in North Korea. The Ch'ongsu Chemical Professional School based on four-school-year system ~~has~~ had three courses -- analytic chemistry, inorganic chemistry and organic chemistry, and ~~the~~ graduates of junior middle schools were able to enter the school. After its promotion to a senior chemical technical school, mechanical engineering course was added to the above three courses and eligibility was limited to those who were graduated from junior technical schools. however, 50X1-HUM graduates from junior middle schools, too, were admitted as before. Enrolment of junior professional school graduates in this school started 50X1-HUM and the mechanical engineering course began receiving new students 50X1-HUM as well. It is expected that the two school systems, old and 50X1-HUM new, will be maintained for the time being and complete change 50X1-HUM

Disposition:

Classification: C-O-N-F-I-D-E-N-T-I-A-L
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into the senior chemical technical school will have been fully completed. The school opened a night study course, beginning [redacted] for the workers of Ch'ongsu Chemical Factory about two kilometers away. In principle night schools were to be on the premises of factory; however, it was less useful for the part of that chemical factory to make a new night school within it than make use of the already-setablished educational institution in its vicinity. The steps of expansion of Ch'ongsu Chemical Professional School were as follows: [redacted] a dormitory capable of accomodating about 300 students was constructed; [redacted] an organic chemistry laboratory was built; [redacted] a machine-operation practice room and an ultramarine factory were eredted for the sake of practice training; and the construction of an auditorium was undertaken [redacted] As for study courses, there had been four courses [redacted] organic chemistry course, inorganic chemistry course analytic chemistry course and night study course; but [redacted] mechanical engineering course was brought into existence and [redacted] the course of social science was added too. The senior chemical professional school was thus developed, covering [redacted] forty-five teachers and about five-hundred students and a total of six study courses.

50X1-HUM

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50X1-HUM

2. Organization

Principal

Chief, School Affairs Department

Chief, Analytic Chemistry Course ...	Composed of six teachers and a supervisor of analytic chemistry laboratory.
Chief, Organic Chemistry Course	Composed of six teachers and a supervisor of organic chemistry laboratory.
Chief, Inorganic Chemistry Course ..	Composed of six teachers, and a supervisor of inorganic chemistry laboratory, and a supervisor and four instructors in charge of ultramarine factory.

Chief, Night Study Course .... Composed of six teachers.

Chief, Mechanical Engineering Course ... Composed of six teachers and two supervisors in charge of machine-operation practice room.

Chief, Social Science Course ..... Composed of seven teachers.

Chief, School Library

Chief, Finance Department

Dormitory inspector (1)

Carpenters (2)

Laborers (2) for boiler

Warehouse manager and four workers

Party and groups

Chairman, Party Committee

Chairman, Trade League

Chairman, Democratic Youths' League

a. Principal:

The principal, as the highest authority, directs and supervises all the affairs of the school. He controls [illegible] teaching administration through the head of the school affairs department; financial administration through the head of the finance department. In the end of August every year, commencement ceremony is held; after which the school reports on educational results to the Ministry of Education and to the Educational Bureau, Heavy Industrial Committee. Actually the principal does not go to class to teach, but he is required to organize two or three lecture meetings each month for further culture of students. He frequently inspects [illegible] teaching plans of teachers, observes their teaching in classes and guides them. At the start of every September, the principal makes up annual work programme and monthly work programme every month, He directly [illegible] deals with the personnel administration of the school excluding the [illegible] nomination of teachers. He also convokes teaching staff meetings to discuss all the problems of the school. Besides, he deals with the

distribution of graduates and sends their recommendations to the staff bureau of the Heavy Industrial Committee, taking into consideration their school records and personal behavior in the school.

b. Chief of School Affairs Department:

The chief of the School Affairs Department acts under the direction of the principal, and takes charge of school affairs administration. He produces teaching plan by course and time-schedule in accordance with class, semester, month, week and subject; adjusts the status of attendance of teachers; preserves personal documents and school registers; and represents the principal in external relations. Principally he is not expected to teach students but sometimes he does.

c. Chief of Finance Department:

The chief of the Finance Department is charged with financial affairs. He controls school budget; takes charge of ensuring the life of teachers and operating dormitory; supervises all school facilities; and handles the work providing side jobs for the teachers. In other words, he manages the work concerning the distribution of food and clothing and monthly payment; and provides operating funds necessary to the school. Finally he makes year-end finance settlement report at the end of each year and submits it to the financial bureau of the Heavy Industry Committee.

d. Chief of Course:

The chiefs of courses are under the command of the principal and the chief of the School Affairs Department, and they are in charge of the teachers and students belonging to their respective course. They adjust the distribution of course members or classes in consultation with the chief of the school affairs department and approve the teaching plans of junior teachers. They have about 300 teaching hours equivalent to half of those allocated for regular teachers in a semester. The chief of course makes weekly work plans which will be approved by the principal and then will be put into effect. He calls a meeting at a time when necessary to discuss on the course's project. In addition, he observes lectures conducted by regular teachers to guide them and directs the operation of laboratory handled by each course and

of practice factory.

e. Chairman of Party Committee:

The chairman of the School Party Committee does not conduct full-time service for the chairmanship. He is selected strictly among the teaching staffs who are concurrently party members.

f. Chairman of Democratic Youths' League:

The chairmanship the Democratic Youths' League has become professional [redacted] He was selected among technical laborers 50X1-HUM Ch'ongsu Chemical Factory. His main task is to step up morale and party-political indoctrination activity for the students.

3. Inspection Activity of Upper Echelon:

Various schools in North Korea are inspected by upper echelon at times. For this inspection, however, there is no available rule prescribing the number of times, date and time, and principles of inspection. The inspection is arbitrarily conducted according to the necessities of the government, the Party, the Ministry of Education and other ministries. Concretely speaking, it takes the form of a guidance for lower echelon by upper echelon, not by the standing national inspection organizations, i.e., the National Inspection Committee, the Financial Inspection Committee, and the inspection organizations of the Party. Accordingly the inspection activity directed toward the Ch'ongsu Chemical Professional School has been carried out irregularly by the educational departments of the Party, the Heavy Industrial Committee, the Ministry of Education and provincial people's committees. It can be called tentative or extraordinary inspection. The inspection activities conducted by upper echelon, that the school had gone through [redacted] 50X1-HUM [redacted] are summarized as below. 50X1-HUM

a. Concentrated Inspection Taken by Central Party [redacted] 50X1-HUM [redacted]

1) Substance ..... This inspection was not limited to the school but was adapted to the whole province of P'yongan-pukto. The school received it [redacted] as part of the 50X1-HUM

Concentrated Guidance Project which was carried out, through 50X1-HUM whole P'yŏngan-pukto, by the Central Committee of the Labor Party during the four-month period

2) Method ..... An inspector despatched from the Central Party Committee conducted the inspection. He described as the first step the major points of the inspection, and let all teachers, employees and students propose their opinions about school projects and the lives of other people. Amid this process, the inspector had many talks with them, to implement a major "must" for the school. It was at that time to eradicate the stagnation of ideological preparedness of teachers. For this, teachers' meeting was held every day and all teachers were examined one by one.

3) Results ..... The conclusions that were made through the above Concentrated Inspection (Guidance) were as follows:

a) The quality of the teachers are poor. They have done little studying.

b) The teachers are poorly trained from the ideological point of view, so that the ideological indoctrination activity for the students has been poorly developed.

c) Some teachers do not meet the requirements necessary to be a qualified teacher: one teacher was a draft dodger; one cooperated with the ROK Armed Forces during the Korean War; one was involved in home disputes and beat his wife sometimes; and one committed such dishonorable acts as a teacher as dictating to and occasionally beating students. These wicked teachers were all dismissed.

b. Inspection Undertaken by Ministry of Education 50X1-HUM

This inspection was aimed at examining the real ability of the students.

c. Inspection Taken by Heavy Industrial Committee 50X1-HUM

This inspection was carried out for the purpose of examining the real conditions of the Ch'ongsu Chemical Professional School as a preliminary to promoting it to the status of senior chemical technical school.

1) Inspector ..... Two staff members of the Educational Department, Heavy Industrial Committee.

2) Substance of Inspection ..... It was to know whether there would be any troubles in study after upgrading the Ch'ongsu Chemical Professional School and what measures would have to be taken thereafter. Consequently emphasis in the inspection was placed on the status of school facilities, of teaching staff and of compilation of school budget.

3) Conclusions of Inspection:.....

a) The Ch'ongsu Chemical Professional School can be turned to Ch'ongsu Senior Chemical Technical School with the existing facilities.

b) It is necessary to reshuffle some teachers.

c) The school budget may be fixed at the former level for the time being; however, some increment will have to be taken into consideration.

After the inspection, part of teaching staffs were reshuffled and five new teachers came to the school, mainly consisting of those who majored in natural science -- technical engineering.

d. Inspection Taken by Educational Department of P'yongan-pukto People's Committee [redacted] 50X1-HUM

1) Inspector ..... Two staff members of the educational department of the P'yongan-pukto People's Committee plus one staff member of the educational department of the Ch'ongsong-gun People's Committee.

2) Purpose of Inspection ..... This was to grasp the pattern of material and cultural life of the students and to discuss over the possibility of assisting other schools in P'yongan-pukto for the enhancement of technical education.

3) Results of Inspection ..... It was concluded that the cultural life of the students was comparatively good. A new proposition that the food production for the students be improved by improving the side-line production of the school was made, and three chongbos more of land were allotted for use of the school, through the Ch'ongsong-gun farm-People's Committee, to increase farm crops. At the same time another task proposed was to help promote the technical education of four junior institutes for orphaned children in P'yongan-pukto

by supplying experimental chemicals produced by the laboratories of the school.

e. Inspection Conducted Once a Month by Ch'ongsong-gun Sanitary Inspection Committee:

This sanitary inspection is applicable to all schools in North Korea. The main inspection is for cleanliness and sanitation. If the school fails, it is required to give attention to sanitation procedures prior to giving lessons to the students.

50X1-HUM

4. School Budget

The school had belonged to the Ministry of Chemical Industry until Heavy Industrial Committee was formed with the reorganization of NK's cabinet. The chain of command of the school goes as follows: school budget, distribution and transference of staffs and admission and disposition of students come under direct control of the Heavy Industrial Committee; while teaching administration is directed by the Ministry of Education -- concretely speaking, by the educational departments of provincial people's committees and county people's committees. Accordingly the budget of the Ch'ongsu Chemical Professional School had to be financed through the Department of Education, Heavy Industrial Committee. The total amount of budget reached 8,500,000 won This number shows 20 percent increase The fact is closely connected with the reorganization of the school. It is estimated that the budget will be further enlarged for the sake of expansion of school facilities and improvement of treatment of the teachers and students. Along with the promotion to a senior chemical technical school, the school had to improve dormitory and laboratories and living quarters for the teachers that were previously so inadequate Even part of the living quarters of the Ch'ongsu Chemical Factory had been used for the teachers.

50X1-HUM

a. Compilation of School Budget:

The budget of the school is composed of the following two parts: budget allocated by the state, i.e., by the Heavy Industrial Committee

and budget composed of revenues accruing from self-production of the school. The revenues from the self-production [redacted] amounted to about 2,000,000 won, out of which 1,600,000 won was delivered to the state and 400,000 won was transfered to the school for spending as part of the school budget. New-fiscal-year's budget is required to submit to and be approved by the Heavy Industrial Committee after finishing budget settlement of the preceding year in the end of December each year. Budget funds allotted by the state must [redacted] be used in accordance with the pre-determined items of budget bill. But the self-provided budget funds may be spent as the school concerned wants to. Budget items determined by the school's budget settlement report meeting [redacted] are generally as follows:

50X1-HUM

50X1-HUM

1) Fund for principal
2) Living expenditures for teachers and other personnel
3) Scholarship fund
4) Socio-cultural fund
5) Expenditures for purchasing experimental appliances and chemicals
6) Repairing and purchasing expenditures for school facilities
7) Expenditure for running dormitory
8) Expenditure for graduation practice
9) Expenditure for official trips of teachers and other personnel
10) Expenditure for purchasing books
11) Fuel expenses
12) Expenditure for providing other teaching materials and supplies

a) Fund for Principal:

Principal's fund is a part of budget that is disposable with the authority of principal. It can be broken down as the following: expenses for various events, expenses for guests, expenses for awarding prizes, etc. In special cases, however, it can be used for providing living subsidies for some teachers or providing scholarships for some students.

b) Living Expenditures for Teachers and Other Personnel:

This item is concerned with living expenses of teachers and other personnel -- their monthly pay. There are about 40 teachers

in the school, to each of whom 60 won of average living expenses is paid per month: the amount of all reaches about 30,000 won xa year. As for other employees totalling to about 30 persons, their average monthly pay is 50 won: the total amount of all reaches about 20,000 won a year. The living expenses (monthly pay) of teachers include basic living expenses; if they work overtime, the extra pay per hour 50 chon/ and it is added to the basic living expenses.

c) Scholarship Fund:

Among about 500 students of the school, 300 are scholarship students

There are three kinds of scholarship: scholarship for helpless students, special scholarship and general scholarship. The scholarship for helpless students is offered to the students from South Korea, war orphans and bereaved family members of revolutionists. These students were about 30. The special scholarship is offered to the students who cannot provide schooling expenses even though they have family; these students were totalledat about 50. The general scholarship is given to the sons and daughters of laborers, if more than three brothers and/or sisters attend the school. Those who fell under this category reached about 120. The sums of scholarships were:

Scholarship for helpless students ... 20 won/month (all taken together, 7,200 won a year)

Special Scholarship ... 14 won man/month (all taken together, 8,400 won a year)

General Scholarship ... 5 won man/month (all taken together, 7,200 won a year)

d) Socio-cultural Fund:

The detailed break-down of this item is: expenses for recreation facilities and for purchasing sporting goods, expendes for performance activities, expenses for purchasing and repairing musical instruments, expenses for beautifying the school, medical expenses and expenses for various events. For example, the school made a round ballet hall, about 20 meters in diameter, at the rear of the school-building, by spending about 150,000 won. The school had many sports circles, such as foot-ball team, table-tennis team, volley-ball team, athletic sports team, swimming team, skating team, weight-lifting team, rugby

team, tennis team, etc. All the expenses necessary to these teams -- expenses for buying sporting goods and uniforms and charges for participating in sports contests -- are disbursed from the budget fund.

e) Expenditures for Purchasing Experimental Appliances and Chemicals:
This is the largest item of of the school budget. In the school, there are four practice rooms being employed every day: organic chemistry laboratory, inorganic chemistry laboratory, analytic chemistry laboratory and machine-operation practice room. Even after finishing regular school hours, the students are able to do experiments themselves if they wish, so that a lot of experimental appliances and chemicals are consumed. In purchasing such appliances and chemicals the school may either apply to the Heavy Industrial Committee for them or may enter into a purchase contract with any factory in direct manner. To take an example, acids sulfuric, hydrochloric etc.) which are consumed the most were purchased at a fixed price directly from Hungnam Fertilizer Factory and Pon'gung Chemical Factory.

f) Repairing and Purchasing Expenditures for School Facilities:
This item is for purchasing or repairing desks and chairs for students and tables for teachers. Also included in the item are expenses for repairing school-building, expenses for heating facilities, expenses for planting trees, expenses for ground facilities, expenditures for buying or repairing clock, radio and loudspeaker, and so on.

g) Expenditure for Running Dormitory:
About 300 students were living in the dormitory. They paid merely 4 won for foods and all other expenses were counted up in the school budget: all beddings were bought and facilities of the dormitory were repaired by the school. Budget expenditure for per student is said to be 4 won. Therefore, the actual living expenses for maintaining a student becomes a total of 8 won per month.

h) Expenditures for Graduation Practice:
Average number of graduates amounts to about 150 persons. They are required to undergo two-month graduation practice in the last school

year at various chemical factories. Travelling expenses, food expenses, and expenses for materials necessary for practice are all included in the budget. The total expenditures for graduation practice in 1959 reached 400,000 won.

i) Expenditure for Official Trips of Teachers and Other Personnel:
Since the school is a technical school, it had to maintain organic relations with various chemical factories. Many official trips were made for the purpose of purchasing chemicals, borrowing or lending books concerning technology and preparing for trips of inspection. All the charges relating to the training of teachers, to participation of the principal and teachers in central-level meetings, to official trips of financial clerks to P'yongyang and so forth, were paid out of the fund appropriated for this item. The payment for official trip of teachers per day was 1 won and 90 chon.

j) Expenditure for Purchasing Books:
This is the item for the school library to purchase various books. Newly-published books including periodicles are all purchased with this budget fund to the extent that all students can sufficiently make use of them. [redacted] copies of the Political Economy published by People's Economy College were bought by the school. Almost all of the students took advantage of the books in the library except for some which were limited in quantity and are extremely necessary to them. 50X1-HUM

k) Fuel Expenses:
The fuel used by the school was anthracite. It was supplied for the dormitory, dining room, boiler room and laboratories. The total amount of money necessary for fuel consumption is unknown.

l) Expenditure for Providing Other Teaching Materials and Supplies:
Stationery, chalk, visual aids, blackboard and so on, that teachers use, are purchased with this budget fund. The monetary amount of annual consumption is unknown.

As a result of summing-up of [redacted] school budget in accordance with the above items, the total consumption of the budget funds turned out to be 5,000,000 won out of 6,500,000 won originally appropriated. The 50X1-HUM

balance amounting to 1,500,000 won was returned to the national treasury. What occupied the largest percentage in 1959 school budget was the item for purchase of experimental appliances and chemicals and for expanding laboratory facilities. It took about 30 percent of the budget, or 2,000,000 won. Repairing and purchasing expenditures for school facilities took about 20 percent, that is, 1,500,000 won. The reasons for a surplus in the 1959 fiscal year are as follows, in general:

(1) Expendables, prescribed by the state, were regenerated to economize budget money.

(2) Expenditures relating to laboratories that occupied the largest portion in the budget could be much reduced; by receiving a part of experimental chemicals from factories free of charge and by producing some chemicals with the productive capacity of the school. Besides, graduation-practice students brought a lot of useful chemicals from various chemical factories, when they got back to the school.

(3) A project for a school facility remained unfinished in part. The school was to install a gas generator furnace as a heat source apparatus; however, the project was not undertaken for some reason, leaving 300,000 won untouched.

b. Management of School Budget and Procedures:

The school budget is operated by the chief of the financial department. Allocated by the Heavy Industrial Committee, budget money is deposited in the Ch'ongsong-gun branch of the Central Bank by opening an account. In most cases, financial matters of the school are settled in the bank by transfer except the payment of salary which must be dealt with in cash. The accountant of the school is required report on specifics of monthly budget disbursement and on the budget settlement of each year at the year-end to the Heavy Industrial Committee.

The disbursement of school budget is controled by the chief of the financial department but is required to to have the approval of the principal.

5. Organization of Teachers

Principal

Chief of School Affairs Department

Chief of Social Science Course ... Under him there are seven teachers.

Chief of Organic Chemistry Course ... Six teachers and a supervisor in charge of laboratory.

Chief of Inorganic Chemistry Course ... Six teachers and a supervisor in charge of laboratory.

Chief of Mechanical Engineering Course .. Six teachers and a supervisor in charge of machine-operation practice room.

Chief of Analytic Chemistry Course ... Six teachers and a supervisor in charge of laboratory.

Chief of Night Study Course ..... There are six teachers.

Each course has one chief and five to six teachers. All the questions regarding to the students of a course are solved within the body of that course and classes of the same course are taken charge of by the teachers of the course. Problems of importance and the decisions about them must be approved by the principal before implementation. For instance, lesson plans of class teachers are controlled; teaching plans are reviewed in those meetings. However, lectures are carried out in accordance with the over-all plan of the school. Therefore, teachers of one course can give lectures in other courses.

6. Composition of Teachers

a. By Qualification:

Only those who are graduated from four or five-year university or colleges of the same academic fields, social or technological, and who passed engineer's qualifying examination can become teachers of the school. Even so, there were also unqualified teachers. These ratios were as the following:

Qualified teachers ..... 36 persons

Unqualified teachers ..... 4 persons

Total .....40 persons

The four unqualified teachers were graduated from Hungnam Senior Chemical Technical School and Kusong Senior Mechanical Engineering Technical School, all of whom had the qualification of associate engineer. In the school they had the position of head of chemical laboratory or machine-operation practice room. All of them were attending the communications department of Hamhung Chemical Engineering College. They were expected to be qualified teachers within two or three years.

b. By School Graduated from:

People's Economy College ..... 1 person

KIM Il-song University 2

Songdo Politics and Economics College 5

Hamhung Engineering College 14

Teachers who passed engineer's qualifying examination ...13

Hamhung Senior Chemical Technical School 2

Kusong Senior Mechanical Engineering Technical School ... 2

Total 40

c. By Social Origin:

From laborer's and extremely poor farmer's classes .....35 persons

From rich farmer's class 2

From office worker's class 3

Total 40

d. By Party or Social Group:

Labor Party 23

Democratic Youths' League 15

Nonpartisan teachers 2

Total 40

The two nonpartisan teachers were so old that they could not be affiliated even with Democratic Youths' League.

e. By Place of Birth:

North Korea ..... 36 persons

South Korea 3

China 1

Total 40

f. By Age:

Above 40 years ..... 3 persons

30 to 39 years 22

25 to 29 years 15

Total 40

7. Treatment of Teachers

a. Salary:

The basic allowance of qualified teacher of professional school is 60 won. Teachers of social science without a technical qualification receive only 60 won at first. The teachers who are possessed of a technical qualification diploma have technical allowance in addition to the basic allowance: 10 percents of basic allowance for engineers; 8 percents for assodiate engineers; 6 percents for assistant engineers. Besides, there is service allowance. For this, it is ruled that less than 10 percents of basic allowance be offered according to teaching experiences. Detailed information on this rule is not available.

b. Special Treatment for Teachers:

Special goods supplied for teachers are: one over-coat every four years; one summer-suit a year; and one winter-suit a year. They cost merely half of the real prices. Engineers are treated the same as those who receive the treatment of 3rd grade of central supply.

c. Distribution, Transfers and Promotion of Teachers:

The distribution of teachers is conducted as a whole by the staff department of the Heavy Industrial Committee. The employment and transfers of teachers cannot be executed by the school itself. The principal simply places them in proper positions in the school.

There is little personnel transfer in North Korea, especially in schools. If a teaching staff is once organized, that continues without change, so that promotion of teachers are infrequent

8. Teaching Subjects by Course

a. Four-Year Chemical Professional School:

Subject		Course: Organic Chemistry Course	Inorganic Chemistry Course	Analytic Chemistry Course	Mechanical Engineering Course
Social Science		History of Party Struggles	"	"	"
		World History	"	"	"
		Literature	"	"	"
		Political Economy	"	"	"
		Russian	"	"	"
		Enterprise Management	"	"	"
General Natural Science	Physics	Physics	"	"	"
		Physical Experiment	"	"	"
	Mathematics	Trigonometry	"	"	"
		Algebra	"	"	"
		Analytic Geometry	"	"	"
		Advanced Algebra	"	"	"
		Calculus			
Common Technical Subjects			Organic Chemistry	"	"
		Inorganic Chemistry		Inorganic Chemistry	"
		Analytic Chemistry	"		Analytic Chemistry
Professional Technical Subjects		Operation and Apparatus	"	"	"
		Oil and Fat Chemistry			
		Resin Chemistry			
		Brewing Chemistry			
		Colloid Chemistry			
		Bio-chemistry			
			Acid Chemistry		
			Alkali Chemistry		

		Metalic Chemistry		
		Non-metalic Chemistry		
			Quantitative Analysis	
			Qualitative Analysis	
			Analytic Reagent	
Professional Technical Subjects			Metrics	
				Chemical Engineering
				Construction Dynamics
				Material Engingineering
				Machine Design
				Drafting
Graduation Subjects	Graduation Practice	"	"	"
	Graduation Research Study	"	"	"
Other Subjects	Hygienics	"	"	"
	Domestic Science	"	"	"
	Study of Revolutionary Traditions	"	"	"

b. Two-Year Senior Chemical Technical School:

Subject \ Course		Organic Chemistry Course	Inorganic Chemistry Course	Analytic Chemistry Course	Mechanical Engineering Course
Social Science		History of Party Struggles	"	"	"
		Russian	"	"	"
		Literature	"	"	"
		Political Economy	"	"	"
		Enterprise Management	"	"	"
		Economic Geography	"	"	"
		Logics	"	"	"
General Natural Science	Physics	Physics	"	"	"
		Physical Experiment	"	"	"
		Mineralogy	"	"	"
	Methametics	Analytic Geometry	"	"	"
		Advanced Algebra	"	"	"

General Natural Science	Methame-tics	Calculus	"	"	"
Technical Subjects		Inorganic Chemistry	Organic Chemistry	"	"
		Analytic Chemistry	"	Inorganic Chemistry	Analytic Chemistry
Professional Technical Subjects		Operation and Apparatus	"	"	"
		Oil and Fact Chemistry	Acid Chemistry	Quantitative Analysis	Chemical Engineering
		Resin Chemistry	Alkali Chemistry	Qualitative Analysis	Construction Dynamics
		Brewing Chemistry	Metalic Chemistry	Analytic Reagent	Material Engineering
		Colloid Chemistry	Non-metalic Chemistry	Metrics	Machine Design
		Bio-chemistry			Drafting
Graduation Subjects		Graduation Practice	"	"	"
		Graduation Thesis	"	"	"
Other Subjects		Hygienics	"	"	"
		Domestic Science	"	"	"
		Study of Revol-utionary Trad-itions			

9. Detailed Information on Teaching Subjects

a. Four-Year Chemical Professional School: 50X1-HUM

In this school, there is an organic chemistry course, inorganic chemistry course, analytic chemistry course and mechanical engineering course [redacted] Teaching subjects can be grouped in general as the following: 50X1-HUM

1) Subjects pertaining to social science,

2) Subjects pertaining to general natural science,

3) Common technical subjects,

4) Profe sional technical subjects,

5) And other subjects.

The teaching subjects of the above items 1, 2, and 3 are common ones compulsory for all students, but the subjects of ~~the~~ items 4 and 5 are different ones according to course. As for technical subjects, the differences between courses are as follows:

a) Organic Chemistry Course:

Among the common technical subjects, only inorganic chemistry and

analytic chemistry are dealt with in this couse. Instead, organic chemistry is learned in full through professional technical subjects such as oil and fat chemistry, resin chemistry, brewing chemistry, colloid chemistry, bio-chemistry and operation and apparatus.

b) Inorganic Chemistry Course:

The common technical subjects taught in this course are organic chemistry and analytic chemistry. The specialized professional technical subjects are: acid chemistry, alkali chemistry, metalic chemistry, non-metalic chemistry and operation and apparatus.

c) Analytic Chemistry Course:

The common technical subjects are organic chemistry and inorganic chemistry; while the specialized professional technical subjects are quantitative analysis, qualitative analysis, metrics, analytic reagent and operation and apparatus.

d) Mechanical Engineering Course:

Dealt with as the common technical subjects are organic chemistry, inorganic chemistry and analytic chemistry; while the specialized professional technical subjects are operation and apparatus, construction dynamics, material engineering, machine design and drafting.

e) Other Subjects:

Hygienics is a compulsory subject for all students. It is lectured once for an hour per week after normal lessons. Besides female students learn domestic science for about two hours a week, also taking advantage of extra hours after lessons. Graduation practice is performed through two months at various chemical factories in North Korea. The real aspect of graduation practice [redacted] 50X1-HUM [redacted] was like below. 50X1-HUM

Days of Practice: 60 days

Factories Where Practice Was Practised: Hungnam Fertilizer Factory, Pon'gung Chemical Factory, Aoji Chemical Factory, Sunch'on Chemical Factory, P'yongyang Pharmaceutical Factory, P'yongyang Central Chemical Research Institute, Ch'ongsu Chemical Factory, Kaesong Jinseng Processing Factory, Sungho-ri Cement Factory, Haeju Cement Factory, etc.

The students who were distributed to each factory did their practice, living with the basic elements of the factory during the period. After finishing the practice they were to receive technical qualification certificate from the factory concerned. During practice in the factories to which they were dispatched, the students made preparations for writing graduation thesis after their return to the school. The title of thesis had to be selected among the ones relating to the technical field in which the student practised under the guidance of technicians of the factory. On completing the graduation practice, they returned to the school immediately to make up graduation thesis and to have it judged.

(1) Number of Teaching Hours:

(a) The total number of teaching hours by Course is as follows:

Teaching hours per week ..... 34 hours
Teaching hours during 1st semester .....544 (16 weeks)
Teaching hours during 2nd semester .....612 (18 weeks)
Teaching hours in a school-year 1156
Teaching hours during four years 4624

The total 4624 hours are broken down as the following.

1. Subjects pertaining to social science:

History of Party Struggles ..... 120 hours
World Histroy 150
Russian 200
Literature 150
Political Economy 80
Enterprise Management 150
Total 850

These totalled 850 hours are common to all courses.

2. Subjects pertaining to natural science:

Physics:

Lecture ..... 200 hours
Experiment 100

Methametics:

Trigonometry	120 hours
Algebra	150
Analytic Geometry	100
Advanced Algebra	100
Calculus	150
Total	920

These 920 hours are common to all courses.

3. Common technical subjects:

Organic chemistry	300 hours
Inorganic chemistry	300
Analytic chemistry	300
Total	900

Out of the above 900 hours, organic chemistry course takes a total of 600 hours -- 300 hours for inorganic chemistry plus 300 hours for analytic chemistry; inorganic chemistry course, 600 hours -- 300 hours for organic chemistry and 300 hours for inorganic chemistry; and mechanical engineering course, also a total of 600 hours -- 200 hours for organic chemistry, 200 hours for inorganic chemistry and 200 hours for analytic chemistry.

4. Professional technical subjects:

As afore-said, professional technical subjects are different according to course; however, the total number of hours is one and the same -- 1,800 hours for each course.

5. Graduation practice:

This practice is designed to be completed in two months, spending a total of about 270 hours. The hours consumed for producing graduation thesis are set at about 170 hours.

6. Other subjects:

The hours for hygienics and domestic science are not defintely set, because these subjects belong to extra-curriculum. So to speak, they are dealt with appropriately in connection with circumstances of the school.

7. The gross total of teaching hours of the professional school's

course is shown as below:

Subjects pertaining to social science	860 hours
Subjects pertaining to general natural science	920 hours
Common technical subjects	600 hours
Professional technical subjects	1,800 hours
Graduation practice and thesis	440 hours
Gross Total	4,620 hours

(2) Time-schedule by School Year

Chemical Professional School

Subject		School Year / Semester	1st Year 1st Sem.	1st Year 2nd Sem.	2nd Year 1st Sem.	2nd Year 2nd Sem.	3rd Year 1st Sem.	3rd Year 2nd Sem.	4th Year 1st Sem.	4th Year 2nd Sem.	Hours per Week
Social Science		Histroy of Party Struggles									1 hour
		World History									3 hours
		Russian									2 hours
		Algebra									3 hours
		Literature									3 hours
		Political Economy									3 hours
		Enterprise Management									3 hours
General Natural Science	Physics	Physics									4 hours
		Physical Experiment									2 hours
	Methametics	Trigonometry									4 hours
		Algebra									4 hours
		Analytic Geometry									3 hours
		Advanced Algebra									3 hours
		Calculus									2 hours
Common Technical Subjects		Organic Chemistry									3 hours
		Inorganic Chemistry									3 hours
		Analytic Chemistry									3 hours
Professional Technical Subjects		Each Professional Technical Subject									25 hours
Graduation Subjects		Practice									
		Thesis									

b. Two-Year Senior Chemical Technical School:

The teaching hours of this school's course are:

Per week ..... 34 hours

First semester .....544 hours (16 weeks)

Second semester .....612 hours (18 weeks)

Annual total of teaching hours .....1,156 hours

Two-year total of teaching hours .....2,312 hours (68 weeks)

Part of subjects in the curriculum of the professional school are not taught in the senior technical school's course: world history, trigonometry and albebra. On the other hand, however, some new subjects that were not dealt with by the professional school, such as economic geography, logics and mineralogy, are included in the new curriculum. As already shown, the teaching hours of the senior chemical technical school are just half of those of the old school, because of the changed two-school-year system; but the varieties of subjects remain unchanged. Namely:

Subjects pertaining to social science ..... 400 hours

Subjects pertaining to general natural science ..... 400 hours

Common technical subjects ..... 300 hours

Professional technical subjects .....1,212 hours

Total .....2,312 hours

The reason that the senior technical school is able to teach so many subjects in shorter period is very simple. Since the old professional school's system was reorganized [redacted] into junior professional school of two-year course and senior technical school of two-year course, part of teaching subjects that were taught in the old school's course are learned in advance in the junior professional school. So to speak, the senior technical school continues in effect to teach most of the subjects in the curriculum of the junior professional school: the courses of the senior professional school are in fact a continuation of the junior professional school. 50X1-HUM

1) Time-schedule by School Year:

Senior Chemical Technical School

Subject		Semester / School Year	1st 1st Year 1st Sem.	1st 1st Year 2nd Sem.	2nd Year 1st Sem.	2nd Year 2nd Sem.	Hours per Week
Social Science		History of Party Struggles					1 hour
		Russian					2 hours
		Literature					2 hours
		Political Economy					2 hours
		Enterprise Management					2 hours
		Economic Geography					2 hours
		Logics					1 hour
General Natural Science	Physics	Physics					3 hours
		Physical Experiment					1 hour
	Methametics	Mineralogy					1 hour
		Analytic Geometry					2 hours
		Advanced Algebra					2 hours
		Calculus					2 hours
Common Technical Subjects		Inorganic Chemistry					2 hours
		Organic Chemistry					2 hours
		Analytic Chemistry					2 hours
Professional Technical Subjects		Each Professional Technical Subject					15 hours
Graduation Subjects		Practice					
		Thesis					

10. Text-books, Library and Publications

a. Text-books:

The text-books used are as follows:

Title	Place of Publication	Number of Pages
The History of the Korean Labor Party (Book I & II)	The Labor Party's Publishing Agency	800
World History (for senior middle school)	Educational Books Publishing Agency	600
Russian (for professional school)	"	500

Title	Place of Publication	Number of Pages
Text-book of the Russian Language (Book I and II)	Translated version; Orijinal Author: Majul (phonetic)	800
Text-book of the Russian Language	Translated version; Author: Ninapodapoa (phonetic)	800
Conversation Book	Foreign Books Publishing Office	600
Political Economy (Book I and II)	People's Economy College	1,200
Political Economy	Publishing Office for Soviet and Foreign Culture	1,500
Enterprise Management (for university and college)	Educational Books Publishing Agency	800
Physics (for senior middle school)	"	800
Physics (for university and colleges)	"	1,000
Trigonometry (for professional school)	"	400
Algebra (for professional school)	"	400
Analytic Geometry (for university and colleges)	"	400
Advanced Algebra (for university and colleges)	"	400
Advanced Algebra (for senior professional school)	"	500
Collection of Methametics Problems (for senior middle school)	"	600
Organic Chemistry (for professional school)	"	500
Russian Grammar	Foreign Books Publishing Office	600
Inorganic Chemistry (for professional school)	Educational Books Publishing Agency	600
Analytic Chemistry	Technical Books Publishing Agency	800
Chemical Experiment	"	600
Operation and Apparatus (for university and colleges)	"	1,000
Chemical Industry (for university and colleges)	"	1,000
Giant-molecule Chemistry (for university and colleges)	"	500
Carbide	Technical Books Publishing Agency	500

Title	Place of Publication	Number of Pages
Sulphuric Acid	Unknown	300
Chemical Calculation	Unknown	400
Reagents	Unknown	500
Fractionating Column	Unknown	400
Ammonia	Unknown	400
Acid and Alkali	Hungnam Chemical Engineering College	500
Quantitative Analysis (for university and colleges)	Educational Books Publishing Agency	500
Qualitative Analysis (for university and colleges)	"	500
Resin Chemistry (Plastics)	Unknown	400
"		
Oil and Fat Chemistry	Unknown	400
"		
Brewing Chemistry	Unknown	400
"		
Benzene	Unknown	500
"		
Colloid Chemistry	Unknown	300
"		
Metallic Chemistry	Unknown	300
"		
Non-metallic Chemistry	Unknown	400

b. Library:

The library of the school had a collection of about 100,000 volumes. The books can be classified in brief as the following: 25 percent Russian books and 75 percent Korean books; 30 percent student's text-books, 20 percent literary books, 10 percent social science books and 40 percent chemical reference-books. In the library, borrowing cards on which borrowers are required to write book title and period of use are prepared. Borrowers can take out books they want to read directly from the book-shelves, no more than ten. If and when they have ten books already, some books should be returned to read more. No charge is requested on the borrowing of books; however, in case of their loss or damage, the borrowers have to compensate for them -- when broken, as much as the price and when lost, three times as much as the price.

c. Periodicals:

1) Newspapers:

a) Nodong Sinmun (Laborer's Press): Daily

b) Minju Choson (Democratic Korea): Daily

c) Minju Ch'ongnyon (Democratic Youths): Daily

d) Cho-sso Sinmun (Korea and Soviet Press): Weekly

e) Kuloja Sinmun (Working People's Press): Weekly

f) P'yongbuk Ilbo (P'yongbuk Daily)

g) Kyowon Sinmun (Teacher's Press): Weekly

h) Munhak Sinmun (Literary Press): Weekly

i) Kisul Sinmun (Technical Press): Weekly

j) Pravda (Justice): Daily

k) Comsomolskaya (Transliteration, meaning Communist Youths League) Pravda: Daily

l) Pionelskaya (Transliteration, meaning Boy's Scout) Pravda: Daily

2) Magazines:

a) Working People: Monthly

b) Democratic Women: Monthly

c) Democratic Young Men: Monthly

d) Economic Construction: Monthly

e) History: monthly

f) Bulletin of Academy of Sciences: Monthly

g) Economy (a Soviet magazine): Monthly

h) School of the Working Mass: Monthly

i) The Translation Monthly: Monthly

3) Pictorials:

a) Korea: Monthly

b) People's China: Monthly

c) Arrow: Monthly

d) Women of the Soviet Union: Monthly

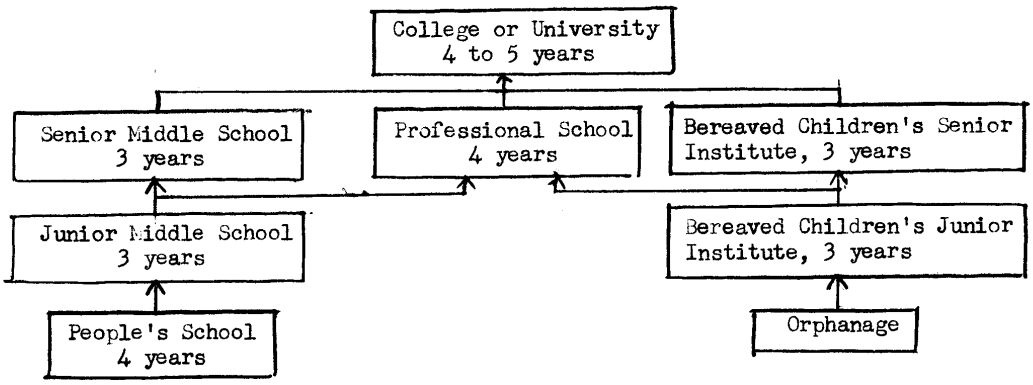
e) Aurora: Monthly

11. Procedures for Entrance, Preparation Project against Graduation, and Distribution of Graduate Students

a. Qualifications for Entrance:

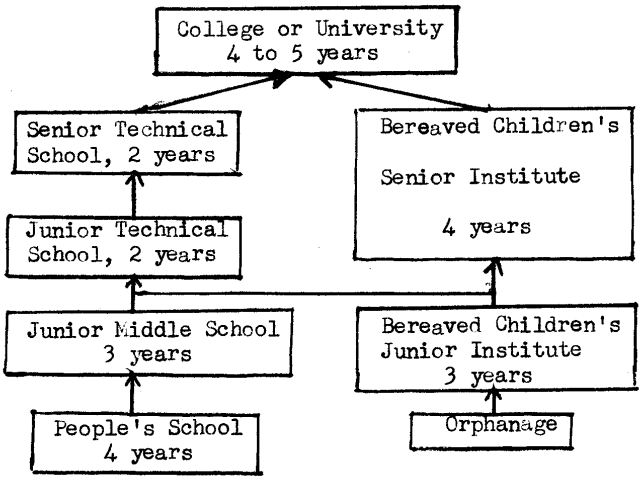
Qualifications for entering the old professional school and the new senior professional school are different.

1) Qualification for Entering the Old Chemical Professional School:



As depicted in the above chart, the graduates of junior middle schools or bereaved children's junior institutes are eligible for the entrance into the professional school.

2) Qualification for Entering the Senior Technical School:



So to speak, the graduates of junior professional schools, who had finished junior middle schools or bereaved children's junior institutes can be admitted to the senior technical school.

b. Recommendation for New Students:

The recommendation work for new students was being continued in the

same way even after the reorganization of educational system [redacted] 50X1-HUM

The season of enrolling new students in North Korea is the month of August. In early July, about a month before the enrolling season, the New Student Recommendation Committee is organized by the educational departments of each county or provincial people's committees comprising representatives of party organizations, of educational organizations and of internal affairs organizations. The New Student Recommendation Committee discusses problems regarding further education of graduate students in its corresponding county or province; adjusts and distributes those students to pertinent schools under the jurisdiction without getting their agreement as far as compulsory educational questions are concerned; and finally notices decided conclusions to schools and students. The committee is to receive applications of students for entering higher grade schools over the level of compulsory education, and disposes them, allowing for the wishes of students but sometimes subjugating to the control of the Ministry of Education over regional allocation of students. That being so, entering a school of one's own choice can be frustrated in some cases. The committee is required to forward the following papers to schools: student's personal history, biographical record and family background, academic results, recommendations (two sheets), four photographs and estimation of the recommendation committee.

1) About 50 percent of the new students of the school (Ch'ongsong Chemical Professional School or Ch'ongsong Senior Chemical Technical School) [redacted] were from junior middle schools or technical 50X1-HUM schools in Ch'ongsong-gun; about 30 percent from other junior middle schools or technical schools in P'yongan-pukto excluding Ch'ongsong-gun; and remaining about 20 percent from the rest of North Korea. The applicants from various schools in Ch'ongsong-gun submitted all necessary documents to the school through the Ch'ongsong-gun, New Student Recommendation Committee and other applicants through their pertinent provincial new student recommendation committee.

c. Entrance Examination and Method of Selection:

There is nothing changed in this matter after the shift in educational system.

1) Examination Subjects and Method:

The entrance examination is divided into oral test and character test. The subjects such as literature, Korean language, Russian, history, methametics, physics, chemistry and so on, are all orally tested. The school, when examination season comes, organizes, by subject, examinations sub-committees, each comprising three to five specialized teachers of the subject. The oral test for each subject is conducted by its corresponding sub-committee. In addition there is School Examination Committee in the school, composed of a representative dispatched from the educational department of the Heavy Industrial Committee to guide the school examination, the principal, the chief of the school affairs department, course's chiefs, the chairman of the school party committee, the chairman of the Democratic Youths' League of the school and a staff of the educational department of county. The school examination committee determines finally the successful candidates after scrutinizing into the examination results submitted by each examination sub-committee, applicant's academic records in the schools they attended, their origin, and the recommendation of new student recommendation committee. The most important of all factors necessary for selecting new students, however, is the examination results they made: the primary selection is determined by those results. Other factors are merely referred to at th e time of final pick-up among the primarily-selected ones. Examination results are marked in such ways as excellent, good, passed,or failed. With the selection work finished, the school affairs department transmits a notice which reports success

or failure, date of atten dance and other necessary things to the schools where the applicants were educated. All the applicants eat and sleep in general at the dormitory of the school during their stay. The school is responsible for keeping them as such.

d. Preparation for Graduation and Distribution of Graduates:

The school starts preparing for graduation as the time of graduation gets neat. In the graduation project contained are practice work, making and presentation of thesis, and recommendation work for distributing graduate students.

1) Graduation Practice:

The practice is undertaken during the period of two months from early June to the end of July each year. By holding teachers' general meeting, the school studies and decides on practice factory, number of students to be dispatched to respective factory and qualifications for students to go practising. Practice distribution is closely connected with the work of after graduation distribution. Namely, the after graduation distribution is effected most of all toward the practice factories or toward the technical fields in which the graduate students had gone through their practice. The practice distribution is carefully dealt with from start to finish. The chief of each course makes distribution plan in relation to academic result, personal aptitude and province of birth and submits it to the teachers' meeting at which it is reviewed and corrected for the final decision. The final plan is sent to the educational department of the Heavy Industrial Committee for approval. It is usually passed there without any modification. Discussed in the teachers' meeting, on the other hand, is the problem concerning the guidance of graduation practice; for which some technical teachers are selected imposing on them a responsibility of conducting guidance in their respective designated area.

2) As aforesaid, the practice factories [redacted] totalled about forty 50X1-HUM

including: Ch'ongsu Chemical Factory, Sunch'on Chemical Factory, P'yongyang Central Chemical Research Institute, P'yongyang Pharmaceutical Factory, Hungnam Fertilizer Factory, Hungnam Rare Metal Smelting Factory, Pon'gung Chemical Factory, Aoji Chemical Factory, Haeju Cement Factory, Sungho-ri Cement Factory, Madong Cement Factory, Sinuiju Pulp-Making Factory, Kanggye Pulp-Making Factory, P'yongyang Brewing Factory. Guiding teachers were placed in the following six areas -- one teacher in each area: P'yong-puk and Ch'ongsu Area, P'yongyang and P'yong-nam Area, Hwanghae-do Area, Wonsan Area, Hungnam Area and Ham-puk Area.

On arrival at each practice factory, students are briefed on factory facilities and technical matters. Then they are placed at the appropriate technical posts and work under the same conditions as the basic elements of the workshops, who are to take care of them. In addition, every student has an engineer of the factory in charge of his personal guidance. In connection with this, practice student receives the cooperation of the guiding engineer in the process of preparing for his graduation thesisafter practice hours. Finishing the whole practice, students do practice-summing-up together with the responsible workers of the factory; their technical grade is appraised; and they receive estimation paper from the factory's manager. The estimated technical grades of the 120 practice students were: 7th grade (30 persons); 6th grade (80 persons); and 5th grade (10 persons).

50X1-HUM

3) Making and Presentation of Graduation Thesis:

Prospective graduates make all preparations necessary for producing graduation thesis in the process of practice. Each decides his research subject conducive to overcoming the hardest technical difficulties of the factory in consultation with the factory technicians. During the period of practice, he collects all necessary materials for writing thesis and go on studying on his selected subject. After returning to the school, real thesis-writing

is begun under the guidance of teachers in charge of it. The thesis is required to satisfy the following points:

a) It should be applicable to real industry and contain some values in the point of technical progress.

2) A plan as described in the thesis should be attached.

3) Already-generalized theories should be not be reiterated.

At the time of presentation of the thesis, participants include the principal and other staff teachers, staffs of county party and people's committees, (dispatched staffs) from the Heavy Industrial Committee, and so on. After this, theses that are the most important of all subjects in the final school year are estimated.

4) Distribution of Graduate Students and Recommendation Work:

The distribution of graduates is decided by the Staff Department, Heavy Industrial Committee, on the basis of the school's recommendation which is made by the distribution recommendation committee, in reference to the graduation practice plan. Academic records, personal aptitude and place of birth of students are, of course, taken into consideration in recommendation. The recommendation paper depicts clearly who will be distributed to such and such factory or specialized technical field without referring to the position in the workshop, because all the graduates are unconditionally given qualification certificate of chemical assistant engineer and that they can obtain no higher job title than "assistant engineer" to whatever factory they go. If the recommendation papers are completed, they are taken by the dispatched staff of the Heavy Industrial Committee to his headquarters in P'yongyang. If approved there, he brings with him Distribution Orders and confers them on graduates after the close of commencement ceremony.

5) Commencement Ceremony:

The commencement ceremony is held in August every year. The order of the ceremony is as follows:

a) Entrance of under-graduates

b) Entrance of guests

c) Entrance of graduates

d) Opening address

e) Principal's report on school history

f) Congratulatory speeches of guests

g) Reading of a resolution by the representative of graduate students

h) Award of graduation certificate and assistant engineer's qualification certificate

i) Commendation of graduate students

j) Conferment of graduation souvenirs

k) Closing address

Receiving distribution order as afore-said, the graduate students go to the graduation party which is mediocre and enjoy eating meals and confectionaries and drinking wine or other beverages.

12. Technical Qualification Examination System

In North Korea, there are two examinations, in the main, to test the qualifications of technicians: one is the engineer's qualifying examination and the other, the assistant engineer's qualifying examination. Formerly the two examinations had been handled by the Central Technical Qualification Estimation Committee; but [redacted] the engineer's qualifying examination was conducted by technical colleges of the same fields and the assistant engineer's qualifying examination by technical schools under the control of the Central Technical Qualification Estimation Committee. The Ch'ongsu Chemical Professional School started dealing with the affairs supervising chemical assistant engineer's qualifying examination [redacted]

50X1-HUM

50X1-HUM

a. Preparing Work for Chemical Assistant Engineer's Qualifying Exam.:

1) The schools receive first work directions from the Central Technical Qualifications Estimation Committee in regard to date of examination, applicants for examination and the submission of applications to the Committee, that will classify

all of them by area. If that classification is finished, the Committee entrusts technical professional school in the area with the estimation work of qualifying examination for the convenience of applicants as far as possible. Needless to say, the applicants the Ch'ongsu Chemical Professional School take charge of are all those who work in the Ch'ongsu Chemical Factory or those who live in P'yongan-pukto area.

Pamphlet for Guidance of Engineer's Qualifying Examination:
In this panphlet indicated are examination subjects to be taken, marking methods, procedures for examination and so on.

2) Following the above pamphlet for guidance, the Committee of Engineer's Qualifying Examination is set up in the school. The Committee is composed of General Screening Sub-committees and special subject screening sub-committees. The former consists of principal, chairman of school party committee, chairman of Democratic Youths League of the school, chief of each course and dispatched staffs from the Central Technical Qualifications Estimation Committee. The General Screening Sub-committee is the committee that selects for the last time successful ones among the applicants who passed all the examination subjects, by ascertaining their comprehension on all subjects and their political ideology. If the applicants pass the screening of this committee, they are reported to the Central Technical Qualifications Estimation Committee and finally receive technical qualifications certificate. Special subject screening sub-committees are organized with two or three expert teachers in charge of the subject. These committees are authorized to screen and determine success or failure of applicants in each professional subject. The applicants are all orally tested.

3) The school announces the examination schedule three days before the examination and collects individual examination schedules from applicants. The format of the school's examination schedule

is shown as below.

Date	Subject	1st Room	2nd Room	3rd Room
	History of Party Struggles	900 - 1200		
	Organic Chemistry		900 - 1200	
(Tuesday)	Inorganic Chemistry			900-1600
	Reagents			
	Russian	900 - 1200		
	Literature		900 - 1600	
(Thurs-day)	Methametics			900 - 1600

50X1-HUM

50X1-HUM

Applicants are able to know through the schedule on what day, at what time, and in which room each subject is tested, and they are required to make out their own examination schedule for submission, on the basis of this schedule. The format of applicant's individual examination schedule is as follows.

50X1-HUM

Subject	Date	Test Room
History of Party Struggles	In the morning,	1st Room
Organic Chemistry	In the afternoon,	2nd Room
Russian	In the morning,	3rd Room
Methamatics	In the afternoon,	5th Room
Literature	In the morning,	4th Room
Reagents	In the afternoon,	
Inorganic Chemistry		

Office workers of the school arrange all the applicant's examination schedules submitted by applicants and make the list of

applicants by subject to send it to the examination committee for the subject, that will include all such things about applicants in its charge, as the number of applicants and the names of applicants. Each special subject examination committee announces the order of examination one day before.

4) The school lets the school's finance department solve the questions of the lodging and food of applicants. The finance department collects ration tickets needed during the examination and receive 50 chon a day in money from each as food expenses. All the applicants sleep in the school dormitory, except for those who are living in the Ch'ongsong-gun area.

b. Prescription for Technical Qualifications Examination:

1) The technical qualifications examination is taken once a year and examination subjects are determined by the Central Technical Qualifications Estimation Committee.

2) The subjects which were taken in the chemical engineer's qualifying examination [redacted] are the history of party struggles, literature and Russian in natural science; mathametics, organic chemistry, inorganic chemistry, analytic chemistry and physics among compulsory technical subjects; and also five selected technical subjects of which titles are unknown. 50X1-HUM

3) The applicants for the technical qualifications examination must pass all the examination subjects (a total of 13 subjects) within three years. Even the subjects that were passed successfully in the examination become ineffective after the three years. The annulled subjects are required to be re-examined.

4) The applicants are possessed of their own examination result certificate issued by the Central Technical Qualifications Estimation Committee, on which "passed" is written by the examiner of each subject if the student is successful. If and when the place of examination is changed, it is all right as long as applicants have the certificate in hand.

5) There are five in grade of marks: 5-mark grade (Excellent), 4-mark grade (good), 3-mark grade (fair), 2-mark grade

and 1-mark grade. Those who get marks from three to five are successful ones but the rest are not.

6) The applicants are not counted for absence from their workshops during the period of examination.

7) The order of examination subjects to be taken are determined by the applicant himself. This means that he can take the examination either in all or in part at a time.

8) All the expenses of the applicants while taking the examination are paid by pertinent workshops.

9) Those who successfully go through all the examination subjects are afforded with pertinent technical qualification certificate by the Central Technical Qualifications Estimation Committee, and from then can be treated as prescribed.

c. The chemical engineer's qualifying examination effected in this school [redacted] can be set forth as below in general. The period was for ten [redacted] 50X1-HUM

1) The applicants reached a total of 40 persons of which about 15 percent were females. Among the 40 persons, 20 were the laborers the Ch'ongsu Chemical Factory and 20 were those who came from the areas, such as Sinŭiju, Kusong, Chongju, etc., all in P'yongan-pukto. In regard to their schooling, about 10 persons were graduates or those who left in the middle from senior middle schools; about 20 persons graduated from junior middle schools; and about 10 persons who completed merely the course of primary schools. As a result of the examination, only 7 persons turned out to be successful in all subjects; the rest, partially successful ones -- in two or three subjects. In view of the fact that a total of thirteen subjects have to be passed within three yeats, on an average of four subjects or more a year, the result can be considered quite bad. If the engineer's qualification is acquired, he is paid more for the technical allowance, 10-percent addition to the former salary. Besides he can be promoted to higher position according to workshops.

13. Composition of Classes and Students and Guidance Work

a. Composition of Classes:

[redacted] the status of class composition was as follows. 50X1-HUM

1) Day-time Courses:

Organic Chemistry Course -- Senior technical school's course ..... Freshmen's class

-- Old professional school's course ... Sophomore's, junior's and senior's classes

Total: 4 classes

Inorganic Chemistry Course -- Senior technical school's course ..... Freshmen's class

-- Old professional school's course ... Sophomore's junior's and senior's classes

Total: 4 classes

Analytic Chemistry Course -- Senior technical school's course ..... Freshmen's class

-- Old professional school's course ... Sophomore's, junior's and senior's classes

Total: 4 classes

Mechanical Engineering Course -- Senior technical school's course ..... Freshmen's class

-- Old professional school's course ... Sophomore's class

Total: 2 classes

2) Night-time Course:

The night-time course has 4 classes -- freshmen's class, sophomore's class, junior's class and senior's class -- without being divided into specified technical courses.

Taken together, the total number of classes of the school is eighteen; each class contains about 37 students. About 500 students attend the school in the daytime and about 150 students at night. In each class, there are a monitor who is nominated by the principal

and is responsible for administrating class project and chairman of the Democratic Youths' League of class who is chosen in the Democratic Youths' meeting of class and is charged with all the affairs relating to the activities of the class'es League. The class meeting is held once a month. In the meeting dealt with are the problems in regard to the student's morals and studying. It is operated centering around the class' monitor under the guidance of class teacher. As in the case of class meeting, there is a meeting of the Democratic Youths' League of class every month, covering the same problems as agenda. This meeting is of course presided over by the chairman of the classes League, under the control of the chairman of the school's League. The classes of night-time course have only monitors; the Democratic Youths' League of such as class is not organized.

b. Status of Composition of Students:

The composition of students attending the daytime courses are as follows.

1) According to the origin of birth:

The sons and daughters of the component elements of the Ch'ongsu Chemical Factory occupied the most part: about 80 percent were from the class of laborer while the rest, about 20 percent, were originated from the classes of farmer, technician and office worker.

2) According to Sex:

About 50 percent out of all students were females.

3) According to Age:

Most of the students were from 16 to 20, and were graduated from junior middle schools or technical professional schools. The students from 20 to 30 were those who were discharged from services, and amounted to about 20 persons.

4) Others:

About 10 persons were war orphans who had been summoned back home while studying in East Germany, Hungary and other foreign countries.

c. Extra-curricular Activities of Students:

1) Organizations for Art Performances:

a) In this school, there are an orchestra band composed of 40 different musical instruments and a band of old Korean music composed of 30 kinds of musical instruments. The students belonging to these bands make it a rule to practise playing their musical instruments after lectures.

b) There is a chorus of about 50 members.

c) There is a drama group consisted of about 20 members.

d) There is an about-15-member part song group.

e) There is a corps de ballet of about 20 members.

The members of the above art performance circles are used to daily practice. Especially when the times of special memorial events, about three times a year, approach, concentrated practices are conducted under prepared programs.

2) There are rabbit raising room and sericulture room in the school. Male students were breeding about 400 rabbits in their charge, while female students were managing sericulture, twice a year, of which quantity of production is unknown.

3) Sport teams are: foot-ball team, volley-ball team, table-tennis team, tennis team, basket-ball team, swimming team and skating team. Each team consists of about 15 members. They do exercises after lessons.

4) Dormitory Life of Students:

Boarding-students reach a total of about 250. On return to the student's quarters, they should obey the prescribed rules of the dormitory. One superintendent is attached for better guidance of their life.

There is Dormitory Life Committee which consists of representatives of classes and of which chairman is nominated by the principal. In each room of the dormitory is the room's leader who is responsible for the indoor life. The students of the same class are accommodated in a room, so as to review or

prepare for lessons altogether in proper manner. In the daily schedule of the dormitory prescribed are all things necessary for the lodgers to do within the day, such as rising hour, sleeping hour, study hour and so on. Those who want to go out or travel are required to go through the necessary formalities prepared by the Dormitory Life Committee, with the permission of the room's leader or the school authorities. Class teachers visit their students in the dormitory occasionally to guide their life and extracurricular activities.

d. Quality of Students

1) Academic Results:

As a result of guidance inspection by the Ministry of Education [redacted] 50X1-HUM mostly to see the real abilities of students, their quality in a sense became comparatively clear. The inspection was undertaken as set forth briefly in the following. The members of the inspection team were composed of three persons -- one from the Ministry of Education, one from the Heavy Industrial Committee and one from the Educational Department of the P'yongan-pukto People's Committee. On arival at the school, the members set examination questions on mathamitics, physics, Russian language and chemistry -- four subjects in all. Each subject was tested separately on the level fitted to each grade. The examiners free picked up ten students per grade out of the prepared list for the test. Since the students as well as the school authorities did not know of the sudden examination until it was actually taken, no preparation could be made at all in advance. As for the result of the test of forty students, average marks were 70 out of 100 marks in full. The average below 40 marks was considered flunked. There was no flunked student in chemistry and mathametics; but in physics and Russian language, about half of the nominees failed, most of whom were juniors and seniors. There was only one student who got full marks in all four subjects. The students' real ability was thus proved to be good in general. That almost all of the students displayed good results above average and that

there were hardly found any gap in real power between the students -- namely a good balance between them, were the characterestics seen in this school. The fact that most of the flunked were juniors and seniors could be justified by the fact that physics is learned in the first and second school years and in the last two years the Russian language is looked on as a subject of no primary importance. According to the summed-up data concerning the results of terminal examination [redacted] the best was mathametics while the worst was the history of Party struggles and literature. The reason is very simple because studies on technical subjects bear higher importance in view of the nature of the school and most students have a liking for such subjects.

50X1-HUM

2) Moral Conditions of Students:

Generally speaking, the students of the school range from 16 to 20 in age, so that most of them are quite meek. Accordingly, no big unsavoury accident happened except for some minor ones caused by the repulsive nature of man. They were as follows:

a) There was a phenomenon of student's overlooking teachers. Why? In the school, there were about 30 students aged from 20 to 27 who were all regular members of the Labor Party and discharged from military service. They acted for most part as student staffs. About 15 teachers were non-party members. Furthermore, their age was all under 30. Ironically enough, this was indicative of the superiority of those students to the young teachers in the political life. The older students gossipped about the irregularities of such teachers. And they even criticized on their nonuse of honorific titles for students, on their unjust advocacy of some students, on their unprincipled home lives and so on, mostly taking advantage of Party meetings. In the meeting, correct criticism was to be accepted in principle however, that was toned down for the long run for fear that if such a case developed, it might hamper educational project of the school. For that reason the Party organi-

zation of the school was [illegible] changed later. Formerly student Party members and teacher Party members belonged to [illegible] and the same [illegible] the junior Party group; but [redacted] 50X1-HUM students' Party group and teachers' Party group were separated from each other, and it was ruled that teachers should not be criticized by students.

b) Other dishonorable accidents happened sometimes in connection with breeding rabbits in the school (about four times). Under the system of competition, each class was expected to raise rabbits for itself. To win the first place in this competition, some students secretly changed now and then the bad rabbits they had for the good ones of other classes. Stimulated by such misdemeaners, the school authorities paid attention to guidance work for sublimating the life of students. They held lecture meetings twice a month and let students activate mutual criticism between them by means of plastering posters within the campus. As a result, the disgraceful accidents almost disappeared from the school [redacted] 50X1-HUM

c) Occasionally student's love-affairs were found. Since the school was coeducational, such a possibility was too apparent in spite of the school's strict ban on love-affair. [redacted] - 50X1-HUM [redacted] three love-affairs for a year and two months, that went on between seniors in privacy. 50X1-HUM Such relations between the lovers were first found at the time of job arrangement, because the lovers wanted to be together at the same workshop. The school could not help accepting their desires. The three pairs of lovers were said to have fallen in love and decided to work at the same place not long before their graduation. It was proved that there was no obscene act between them, such as sexual intercourse.

3) Awards and Punishments

a) Awards:

Awarded by the school at the end of each school year are principal's letter of commendation, letter of commendation conferred by the chairman of the county people's committee and that of the chairman of the Democratic Youths' League and citation for regular attendance. Together with the honorary certificates, prizes are given to the lucky students. In addition, many academic contests, such as Russian reading, collection of student's literary works, methametical counting etc., are held at indefinite times. The winners are, of course, rewarded with honorary certificate and prize. The prizes given were comparatively large ones equivalent to the worth of about 20 won, because the ..... school had much money accruing from the operation of the ultramarine factory.

b) Punishments:

Withdrawal from the school, cancellation of scholarship, entry disposal and warning were available as means of punishments.

(1) The disposal of withdrawal from the school is hardly taken.

(2) There was once a cancellation of scholarship, second severest punishment in the school while Source was being employed there. To tell the truth, one student had changed secretly his class'es rabbits for better rabbits of other classes'. For that reason his scholarship was annulled; but his privilege was restored two months later.

(3) Entry disposal is meant to a punishment of entering one's errors in the school register. The punishments of this kind were about ten cases on an average a year. Those who fall under the category of such a dishonor are deprived of their right of being student staffs; but they can be free from all restrictions if their acts and academic records are improved to some considerqble degree. Only the school's superintendent is authorized to punish them.

(4) Warning is a reproof that is given by class teachers for those who do not come to school without proper reasons.

This is just a oral punishment aimed at drawing the attention of idle students. However, three warningsare counted as an entry disposal, This system of punishment is, needless to say, part of the school regulations; but was in fact not much applied, for a new educational method was moving in North Korea recently. A positive guidance, not by punishing irregularities but by promoting good was stressed. In consequence, the school was going gradually toward commanding and encouraging good students, instead of pointing out bad students.

14. Laboratory Facilities

As afore-said, there were physical laboratory, analytical chemistry laboratory, organic chemistry laboratory, inorganic chemistry laboratory and machine-operation practice room in the school.

a. Physical Laboratory:

This laboratory is the place where physical experiments are practised. It is under the direct supervision of teacher of physics. There were 6 experimental boards and other machines and appliances in it. The experimental boards made of wood were of the same size -- about twice as large as the ordinary table. The machines and appliances installed in the laboratory as follows:

1) Generator (1 piece):
It is Soviet-made one with the capacity of 5 KW distributed by the Ministry of Education at the time of foundation of the wchool.

2) Compressor (1):
This is also Soviet-made one distributed by the Ministry of Education at the time of foundation of the school.

3) Prime Mover (1): [redacted] 5 HP. 50X1-HUM

4) Transformer (5):
Three were delivered by the Ministry of Education [redacted] 50X1-HUM

they were manufactured by the P'yon yang Taean Electric Machine Factory. Two were [redacted] second-hand ones with the capacity of 5 KW to 10 KW. 50X1-HUM

5) Rectifier (1):

[redacted] mercury rectifier about 1 meter high. 50X1-HUM

6) Appliance of testing for electric cycles (1):

It was made with the cooperation of the teachers of physics and students. The name is unknown but it is said to be comparatively good one.

7) Electric meters:

About 10 Soviet-made volt meters; about 8 Soviet-made ammeters; and about 3 Soviet-made ohm-meters. They were all distrubuted by the Ministry of Education at the time of the first opening of the school.

8) Various precise measure-meters:

About 3 Soviet-made micrometers; about 20 measuring rules, Soviet-made [redacted] about 10 pairs of scales. These were given by the Ministry of Education at the time of foundation of the school. 50X1-HUM

9) Various ore specimens:

There were about 100 kinds of ores collected in North Korea and from the communist states including the Soviet Union.

10) Various electric appliances:

About 3 induction coils; about 5 electric alarms; about 15 loud-speakers; 2 Bulgarian-made radios; 1 Hungarian-made electrophone; about 10 electric motors with the capacity of 5 KW to 10 KW; and about 3 P'yongyang-Taean-Electric-Factory-made batteries.

11) Other physical experimental appliances:

About 5 [redacted] Communist-Chinese-made thermos bottles and about 20 NK-made thermometers. 50X1-HUM

12) Optical instruments:

About 5 [redacted] daylight vanes (driven by daylight); about 5 [redacted] spectroscopes; about 50 Soviet-made [redacted] lenses -- about 10 varieties in kind; and about 10 microscopes 50X1-HUM 50X1-HUM

delivered by the Ministry of Education at the time of foundation of the school, of which five are Soviet-made [redacted] 50X1-HUM

b. Analytic Chemistry Laboratory:

1) Balance, large (8):

These balances were distributed by the Heavy Industrial Committee. Four were Soviet-made; [redacted] and two, Hungarian-made. The soviet-made ones were better [redacted] ones in quality. [redacted] 50X1-HUM

2) Fractionating Column (1):

This was made as a graduation memento by the [redacted] graduate students. The size is about 50 centimeters in the diameter of base and about 2 meters in height. This fractionating column made of iron plate by welding is utilized in analyzing water, raw oil, coal-tar, etc.

3) Soil-analysis apparatus (1):

This was made up, too, by the school to analyze the composition of soils -- to know whether it is acid or alkali.

4) Various analytic chemicals and chemical glasswares:

a) Chemicals:

About 1,000 kinds of chemicals are arranged in a fixed place.

b) Chemical Glasswares:

The quantities and nomenclatures are unknown.

c. Organic Chemistry Laboratory:

The laboratory turns out some resin goods insofar as it has the necessary facilities provided by the students in the end of 1958. There is no balance in it, and so if necessary that is borrowed from the analytic chemistry laboratory.

1) Brewing Apparatus (1):

All the processes of producing toenjang (bean paste) and soy-sauce are imitated in attration on the real factory. The [redacted] graduate students of organic chemistry course made this souvenir for the school. 50X1-HUM

2) Filter (1):

The filter, made by the teachers of the school [redacted] is 50X1-HUM composed of iron poate and sized at about 50 centimeters in diameter and about 1 meter in height. It is used for filtering impure water or other liquids.

3) Chemicals for Use and Specimen Chemicals:

There are about 1,000 varieties in kind; but the quantities and nomenclatures are unknown.

d. Inorganic Chemistry Laboratory:

1) In this laboratory installed is salt-electrolysis apparatus made of iron, about 40 centimeters in diameter and 8 centimeters in height. It was set up by the teachers and students of the school. Making use of this apparatus, the school produces a little amount of caustic soda (NaOH) and hydrochloric acid (HCl).

2) Sulphuric Acid Column (1)

This column, about 50 centimeters in diameter and about 1.5 meters in height, was made by [redacted] graduate students of 50X1-HUM inorganic chemistry course after that of the Hungnam Fertilizer Factory. It is used as an apparatus to produce sulphuric acid (H_2SO_4).

3) Electric Furnace (1):

This is made in attraction after the electric furnace for carbide production equipped in the Ch'ongsu Chemical Factory. The furnace is nothing but a specimen for educational purpose.

4) Chemicals and Chemical Glasswares:

There were about 1,000 chemicals in variety of unknown names. Most of them were produced from the P'yongyang Pharmaceutical Factory. Glasswares were all turned out from the P'yongyang Chemical Glassware Factory; the quantities are unknown.

e. Machine-operation Practice Room:

1) Lathe (3):

The two pieces [redacted] sized at about 6 feet were 50X1-HUM

presented [redacted] by the Ch'ongsu Chemical Factory. These were second-hand ones, so that they can not do precise works. 50X1-HUM

Another lathe of the same size as above two was built by the students of the school [redacted] and its quality was quite better than the Japanese-made ones. 50X1-HUM

2) Drilling Machine (1):

This second-hand [redacted] one wasoffered in 1958 by the Ch'ongsu Chemical Factory. 50X1-HUM

3) Shaper (1):

This Soviet-made shaper was distributed by the Heavy Industrial Committee [redacted] as soon as the mechanical engineering course was set up in the school. 50X1-HUM

4) Machine Tools:

Presented mostly by the Ch'ongsu Chemical Factory were about 50 machine tools in variety.

f. Chemicals in the laboratories were:

Sulphuric acid (H_2SO_4), hydrochloride acid (HCl), caustic soda (NaOH), carbon disulphide (CS_2), acetic acid (CH_3COH), alchol (CH_3COOH), ether (anaesthetic), formalin (anaesthetic), benzol, yellow phosphor, red phospher, potassium cyanide (CNK), potassium chloride (KCl), glycering, fluorine (F), etc. The fixed price of one litre of sulphuric acid was 30 chon in NK currency; one litre of hydrochloric acid, 30 chon; 1 litre of caustic soda, 15 chon.

15. Production

A certain amount of production is conducted in the school with the efforts of teachers and students, not for the profit of the state or the school but for the main end to activate extra-curricular practices. Needless to say, the production scale is very small; not so far above experimental level in the matter of facility. The productive organization of the school also resulted from the [redacted] plenary meetings of the Cental Committee, KLP, as in other schools' cases in North Korea. 50X1-HUM

The [redacted] plenary meeting dealt with the matter of enlarging production of foods and daily necessaries; while in the [redacted] meeting/ the matter of expansion of irrigation-benefitted areas and the development of metallurgical industry, both stressing in common ever more cultivation of local industries. In response to this direction, many a factory was set up in various areas. Schools, too, tried to produce anything they were able to. As a result, the school could turn out goods such as ultramarine, chalk, chemicals and urea-resin goods. 50X1-HUM 50X1-HUM 50X1-HUM

a. Ultramarine:

Ultramarine is a raw material of paint: paint is the mixture of ultramarine and boiled oil used for transformer. North Korea imported the material from Communist China [redacted] The school started producing it [redacted] and could meet all necessary quantity of it. The way of production of ultramarine was searched out by the Ch'ongsu Chemical Factory in the autumn [redacted] with the help of technical books brought from Communist China. And the result of research got applied first in real production at the ultramarine factory of the school. Still now, there is no such factory else-where in North Korea; for with the production of the school's factory, all the demands can be satisfied. It is believed, however, a state-run factory of such a kind will come into existence in the future. 50X1-HUM 50X1-HUM

1) Production Process:

$$10\ (\text{Kaolin}) + 3\ (C_2) + S \xrightarrow{\text{Calcinating}} \text{Ultramarine}$$

Namely: mixture of 10 kilograms of kaolin, 3 kilograms of charcoal, 1 kilogram of sulphur and some water calcinated in the furnace for 8 hours, it becomes ultramarine. As the first step, lumps of kaolin, charcoal and sulphur must be ground into soft powders in the stone mill. These powdered raw materials are kneaded into balls about 10 centimeters in diameter

and put into a porcelain jar formed similar to flower-pot. Then the jar goes into the calcinating furnace to be heated at the high temperature from 900 to 1,000 degrees. The heated balls are nearly white in color but that color changes into indigo once in contact with air. The masses of raw ultramarine drawn from the calcinating furnace are brought to the crushing mill and powdered. The powdered raw ultramarine is poured into water and stirred well. At this time impure things go down onto the bottom of the sorting trough; then they are excluded. After some time passed pure ultramarine settles down in the state of powder. Water is removed. The wet powder is put on the iron plate heated to the temperature from 60 to 70 degrees to dry. This is the last process. The finished ultramarine, then, is packed with cement-bag-paper envelopes.

(See thesketch showing theprocesses of ultramarine production.)

2) Quantity of Annual Production and Price:

The annual output of ultramarine is about 200 tons and the fixed price per kilgram is 10 won in NK currency.

3) Transportation of Raw Materials and Disposal of Finished Goods:

a) Charcoal, produced within Ch'ongsong-gun, was carried to the school by truck through the good offices of the Ch'ongsong-gun People's Committee.

b) Sulphur was distributed by the Heavy Industrial Committee.

c) Kaolin, produced in Chongju-gun, P'yongan-pukto, was transported by train.

d) About 80 percent of finished ultramarine were supplied to the paint factory in Sariwon through the Heavy Industrial Committee and the rest 20 percent were forwarded by post following orders from provincial people's committees and/or other various organizations.

e) Method of Using Income Accruing from the Sale of Ultramarine:

Out of the total annual income amounting to about 2 million won,

80 percent are returned to the state; 20 percent are consumed for the school expenditures -- for clothings and stationaries to be delivered to the students and for the procurement of musical instruments or other facilities conducive to the cultural life of the students.

b. Chalk:

The school began for the first time turning out chalk [redacted] 50X1-HUM The production could be realized by the successful test of making kaolin, raw material of ultramarine, into chalk [redacted] 50X1-HUM

1) Production Process:

Bleaching powder is first added to kaolin and then mixed with an adhesive such as glue. This process can be indicated as the following.

Kaolin + Bleaching Powder + Adhesive (glue) ----> Chalk

The mixing ratios of raw materials are unknown. Anyhow, all the materials once mixed are kneaded and rammed into mold and then dried either in daylight or with artificial heat. The school adopted daylight drying method, for there was no heat-drying apparatus. Chalks thus dried are calcinated in the furnace at the temperature from 900 to 1,000 degrees.

2) Facilities:

Chalk was produced at the ultramarine factory; no chalk factory was available. [redacted] however, it was planned to set up a chalk factory near the ultramarine factory in the future. 50X1-HUM

3) Method of Operation:

For the production of chalk, thestudents were not mobilized but the dependents of the teachers or other personnel were employed on the condition of being paid about 30 won per month. Part of produce was consumed by the school and the rest was distributed to various schools in Ch'ongsong-gun through the

Ch'ongsong-gun People's Committee.

c. Chemicals:

About 50 kinds of chemicals were being made by the students in the process of experiments at the chemical laboratories (organic chemistry laboratory, inorganic chemistry laboratory and analytic chemistry laboratory). , Quantities of chemicals thus produced were not large The following are some of the products: zinc oxide, cinnabar, glacial acetic acid, carbon, benzol, alchol, caustic soda, formalin, ammonia water, etc. Others are unknown.

d. Urea-Resin Goods:

These goods are produced by the organic chemistry laboratory.

1) Production Process:

At first benzol is added to urea and then poured into the mold before becoming hard. The goods were: soap case, ink-bottle, pencil case, triangular rule, pen-holder, and so on.

2) Operation and Quantity and Disposal of Products:

Production operation was conducted by the chiefs of courses. Productive activity was of course done at leisure as extra-curricular practice. After being packed, the goods are given free of charge through the educational bureau of the P'yongan-pukto People's Committee, to the junior middle schools --especially the bereaved children's junior institutes in P'yongan-pukto. The monthly production quantity was about 1,000 pieces out of which remaining part, if any, was delivered for sale to the stores in Ch'ongsong-gun.

3) Price and Monthly Income:

Soap case cost 80 chon; triangular rule, 50 chon; pen holder, 15 chon; ink-bottle, 1 son; etc. The income per month was about 500 won. This was spent for procuring urea and chemicals needed in the laboratories.

16. Night School Course

The night course was established for the first time [redacted] 50X1-HUM

[redacted] and the first graduates left the school in August [redacted] The 50X1-HUM

reason why the course was attached to the [redacted] school has been mentioned already. It was subordinated directly to the Ch'ongsu Chemical Factory and had nothing to do with the school under the jurisdiction of the Heavy Industrial Committee. The school only helped the course by offering teaching staffs, class-rooms and other school facilities. All necessary funds for operating it -- for instance , the selection and distrubution of students and so on -- were provided by the Ch'ongsu Chemical Factory.

1) Method of Operation:

Lecture fees, 80 chon per hour for per lecture, are paid for by the Ch'ongsu Chemical Factory. New students of the night course are selected from among the factory's laborers by the Training Department. Three lectures are given each day except on Saturday when only two lectures are conducted. The curriculum is worked out by the Training Department and forwarded to the school, which distribute it to the teachers. When the unforeseen factory cannot send the students for the study owing to some circumstances, lectures are not given. The course continues throughout the year without having vacation. The commencement ceremony is prepared and distribution of graduates is disposed of as well by the factory.

2) Organization and Composition of Students:

The night course has four-year system. Each class comprises 30 to 40 students; specialized technical courses are not available. As mentioned above, all students were laborers of the Ch'ongsu Chemical Factory and were from the laborer's class. They were from 20 to 35 years old. About 80 percent of the students were regular members of the Labor Party and about 20 percent were females. The hours of study for the students were guaranteed by the factory by providing them with day-shift duties. Examinations were taken at night in the same way as for the students attending daytime courses.

a) Subjects Being Taught:

1. Social Science .... History of Party Struggles, Literature, History and Russian.

2. General Natural Science .... Physics, Algebra, Geometry, Trigonometry, Advanced Algebra, Analytic Geometry and Calculus.

3. Technical Subjects .... Organic Chemistry, Inorganic Chemistry, Analytic Chemistry and Operation and Apparatus.

The information on distribution of the above subjects by school year and on the number of teaching hours is not available.

4. Miscellaneous:

The number of graduates [redacted] was 30 and to all of whom engineer's qualification certificate was given and they were re-distributed to the Ch'ongsu Chemical Factory with higher positions than before. 50X1-HUM

17. Relations Between the School and the Ch'ongsu Chemical Factory

In the points of organization and administration, there is no direct relationship between them. However, they have some incidental relations, since they are located in the same district and both are chemical organizations. Namely:

a. The Ch'ongsu Chemical Factory is the supporting organization of the school. That was decided by the Heavy Industrial Committee, because all the sons and dughters of the workers of the factory attended this school. All schools in North Korea were to have their own supporting organization. The roles of the Ch'ongsu Chemical Factory as a supporting organization are:

1) To furnish its ideas on modus operandi for the school.

2) To extend material aid needed in education. For example, steam heating of the school was guaranteed by the factory; and the latter presented two lathes and one drilling machine for the machine-operation practice from the former. In addition,

other chemicals were supplied when needed.

3) To provide living houses for the teachers of the school.

4) To take care of home education of the students.

b. One of the ends of having established the school in Ch'ongsu Laborers' District was to bring up technicians demanded by the Ch'ongsu Chemical Factory. There were at least 200 persons in the factory who were graduated from the school. The undergraduates make the best use of it for the benefit of practice. On the occasions of the school's main events or ceremonies, leading workers of the factory are invited to attend them; and vise versa.

c. The night study course for those who work at the Ch'ongsu Chemical Factory is opened at the school thus deepening the relationship between the school and the factory.

d. Both of the Ch'ongsu Chemical Factory and the school are subordinated to the Heavy Industrial Committee. Short-term lectures, one of the important programs of the factory, were frequently given at the school. And many meetings were held there too. In a sense, the two organizations may be construed as one body.

18. Miscellaneous Chemical Professional School in North Korea

Except for the school hitherto explained, there are two other chemical professional schools in North Korea -- Hungnam Chemical Professional School and Sungho-ri Chemical Professional School.

a. Hungnam Chemical Professional School:

This school was built just after the liberation of Korea. Its foundation was then urgently needed because of the existence of the Hungnam Fertilizer Factory. It was reorganized [redacted] into a senior technical school of two years for training associate engineers. 50X1-HUM

[redacted] Eligibility was 50X1-HUM

limited to those graduated from senior middle schools. The Hungnam Senior Technical School was the only one of its kind in North Korea [redacted] Later [redacted] it became a senior chemical technical school like the Ch'ongsu Chemical Professional School did in accordance with the educational '' reform. This means the school was lowered a step down in grade. Formerly, senior middle school graduates had eligibility to enter the senior technical school, and after which graduation associate engineer's qualification certificate was given to each. In addition, the teachers of that school were treated the same as instructors of colleges. After the reorganization into '' Hungnam Senior Chemical Technical School, however, professional school graduates were admitted for entrance. After graduation they received assistant engineer's qualification certificate. In fact this school ranks the same as former chemical professional school or senior middle school.

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50X1-HUM

1) Technical Courses:

There are four courses, i.e., organic chemistry course, inorganic chemistry course, analytic chemistry course and mechanical engineering course like the Ch'ongsu Chemical Professional School. In addition, night study course exists in the school. The mechanical engineering course was established [redacted]

50X1-HUM

2) Teaching Staffs:

The teaching staffs of this school were better, in quality, than those of the Ch'ongsu Chemical Professional School. It was because there were not a few good teachers on the level of college instructors, for it has the history of having been a senior technical school and none of the then teachers was transferred.

3) School Facilities:

The facilities of the school were almost the same as installed in the Ch'ongsu Chemical Professional School. Only one conspicuous difference was that the machine-operation practice room was far better equipped, because the mechanical engineering course was opened earlier [redacted] There were about 20 machine tools and 4 lathes in the practice room while in the Ch'ongsu Chemical

50X1-HUM

Professional School there was only 1 lathe furnished at the outset of the Flying Horse Movement.

b. Sungho-ri Chemical Professional School:

This school has the shortest history of chemical professional schools in North Korea and so school facilities are the most insufficient. It was founded after the Armistice in the vicinity of Sungho-ri Cement Factory. It is expected to be re-named P'yongyang Chemical Professional and to be reorganized into a senior chemical technical school [redacted] 50X1-HUM

[redacted]

1) Technical Courses:

Divided technical courses are the same as those of the Ch'ongsu Chemical Professional School including night study course. [redacted] 50X1-HUM

[redacted] the school turned out only the first and second graduates. 50X1-HUM

2) Teaching Staffs:

The teaching staffs of this school are inferior to those of the Ch'ongsu Chemical Professional School.

3) Prospects:

Though the school is of very small account at present compared with other chemical professional schools in North Korea, it is expected to be expanded in the future for it is a chemical professional school in the metropolitan city. It will be the largest school of its kind in North Korea.

c. Others:

Chemical professional schools in North Korea, a total of three at present, will be increased more in the days to come. The chemical schools expected to be brought into existence are: Haeju Chemical Professional School in Haeju; Sunch'on Chemical Professional School in Sunch'on; and so on. The Ch'ongsu Chemical Professional School had been planned to be removed to Sunch'on [redacted] but the plan was changed later 50X1-HUM and the school was left ~~remained~~ at the present location.

19. Explanation to the Sketch of the School:

a. Main Building:

This is a L-formed two-story brick building coated with cement. It has a gable-formed cement-tile roof. The size of the main part is about 50 meters long, 15 meters wide and 8 meters high while its wing is about 15 meters long, 10 meters wide and 8 meters high. In the lower floor of the main part are class-rooms, physical laboratory (at the north-eastern end) and a small room (adjacent to the physical laboratory and across corridor) used as the warehouse of equipments and materials for military training. There are two rooms in the wing (lower floor) -- office-room (on the north-eastern side) and the warehouse of the Finance Department. Near this warehouse is the entrance of this building. In the center of the main part there is a basement, about 10 meters long, 15 meters wide and 4 meters deep, which is used as the room for preserving vegetables. In the upper floor are: school-affair administration room and principal's room (at the south-eastern end), drafting room (above the physical laboratory), rooms of the chiefs of ... organic, inorganic, analytic chemistry courses (above the warehouse of the Finance Department) and library (above the office-room of the Finance Department); other rooms are class-rooms. The number of class-rooms in this building is, taken together, sixteen. Staircases to the upper floor are in two places. Originally this building had been utilized by the Japanese as dormitory of the Ch'ongsu Chemical Factory. After the liberation of Korea, it was reconstructed into the school-building.

b. Building:

The building is a one-story wooden building, about 20 meters long, 10 meters wide and 4 meters high, with a roof of gable-formed cement-tiles. [redacted] it was re-modelled after the liberation. The west part of the building was occupied by the analytic chemistry laboratory; the eastern part by the inorganic

50X1-HUM

chemistry laboratory NOFORN

c. Building:

It is a one-story wooden building, about 10 meters long, 8 meters wide and 4 meters high, with a roof of gable-formed cement-tiles. This building, used as the organic chemical laboratory, was built [redacted] by the labors of students. 50X1-HUM

d. Building:

This building used as the carpentry room is about 8 meters long, 6 meters wide and 4 meters high; it has a roof of gable-formed cement-tiles. There are carpentry tools and lumbers in that room.

e. Dormitory:

The two-story red-brick building with a roof of gable-formed cement-tiles is about 40 meters long, 15 meters wide and 8 meters high. It was built by the workers of the Construction Department of the Ch'ongsu Chemical Factory. Rooms are on both sides of the corridors. Dormitory inspector's room is on the left hand of the entrance-hall; bath-room and wash-room are at the west end of the building. Each living room accomodates six persons. Except the room in the middle, which is used for the Dormitory Life Committee and recreation, there are only student's quarters on the upper floor. In the recreation room, amusement tools such as checker-board, chess-board, violin, kayagum (a Korean harp), etc., are available for students, but they are used only in the daytime.

50X1-HUM

f. Dormitory Restaurant:

This building [redacted] is a single-story cement-block-building, about 20 meters long, 15 meters wide and 4 meters high and with a gable-formed cement-tile roof. The number of dining-tables inside was about twenty.

g. Boiler Room: 50X1-HUM

This building constructed by the students of school [redacted]

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is a single-story cement-block-building, about 15 meters long, 8 meters wide and 5 meters high and with a gable-formed cement-tile roof. Installed inside is a boiler with the capacity of 15 K.

h. Toilet-room:

This is a single-story red-brick building about 15 meters long, 4 meters wide and 3 meters high and with a gable-formed cement-tile roof. It was built after the August 15 liberation in 1945.

i. Ballet Hall:

As shown in the attached sketch it is a round hall, about 15 meters in diameter. [redacted] The ground is covered with cement-concrete and at the center of the hall stands an electric lamp pole. Students enjoy mass-dancing in dancing hall on Saturdays, on Sundays or on memorial days. 50X1-HUM

j. Bulletin Board:

This was made by the efforts of students [redacted] The size of the stone bulletin board is about 8 meters long, 1 meter wide and 2 meters high. 50X1-HUM

k. Auditorium:

The auditorium built by the Construction Department of the Ch'ongsu Chemical Factory is a two-story red-brick building, about 25 meters long, 10 meters wide and 8 meters high. The construction w[redacted] 50X1-HUM
the building was begun [redacted]
[redacted] the foundation work 50X1-HUM
had been finished and first-bloor brick-laying was done half. For this construction 4 million won was allocated by the Heavy Industrial Committee. The first floor of this building, if completed, was to be used as auditorium; the second floor as library.

l. Building:

This is a single-story building, about 20 meters long, 10 meters wide and 4 meters high, which was built by the students [redacted]

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This is the ultramarine factory. Inside the building installed are: 2 ball mills, 3 motors, 1 stone mill, 1 sorting trough, 1 drying board and 1 calcinating furnace.

CH'ONGSU SENIOR CHEMICAL ELECTRICAL SCHOOL

SKETCH SHOWING PROCESSES OF ULTRAMARINE PRODUCTION